AFCTN Report 94-087

AFCTB-ID 94-095

Technical Raster Transfer Using:

Loral Training & Technical Services' Data Supporting:

STRICOM MILES Program

(Contract #N61339-91-C-0140)

MIL-STD-1840A
MIL-R-28002A (Raster)

Quick Short Test Report

09 July 1994

Prepared for
Electronic Systems Center
Air Force CALS Program Office
HQ ESC/AV-2
4027 Colonel Glenn Hwy Suite 300
Dayton OH 45431-1672

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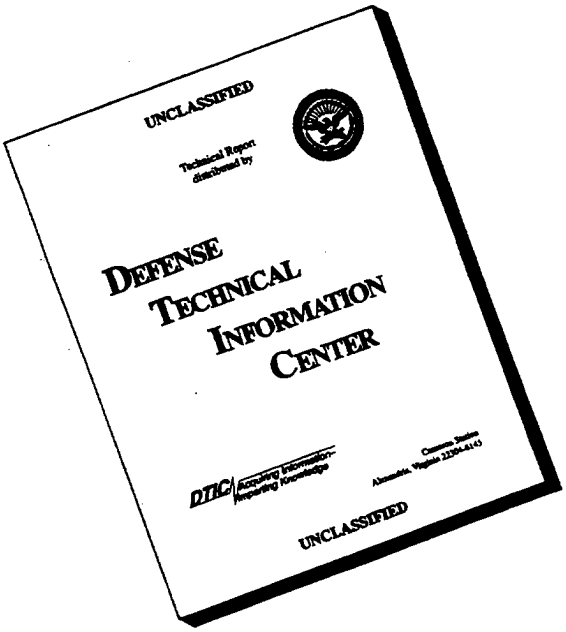

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Quick Short Test Report

09 July 1994

Prepared By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

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Air Force CALS Test Bed

Notification of Test Results

09 July 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

Loral Training & Technical Services

Identified as follows:

Title:	**Technical Raster Transfer**
Program:	**MILES**
Program Office:	**STRICOM**
Contract No.:	**N61339-91-C-0140**
QSTR No.:	**AFCTB-ID 94-095**

Received on the following media: **9-Track Tape**

The results of the QSTR evaluation are as follows:

MIL-STD-1840A Standard	**Fail**
MIL-STD-1840A Media Format:	**Pass**
MIL-D-28000A IGES:	**N/A**
MIL-M-28001B SGML:	**N/A**
MIL-R-28002A Raster:	**Fail**
MIL-D-28003 CGM:	**N/A**

Formal results with associated disclaimer are documented and available from the AFCTB.

Air Force CALS Test Bed
HQ ESC/AV-2P
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Dayton, OH 45431-1672
Phone: 513-257-3085 FAX: 513-257-5881

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1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Loral Training & Technical Service's interpretation and use of the CALS standards in transferring technical Raster data. Loral used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 94-095

Date of Evaluation: 09 July 1994

Evaluator:
George Elwood
Air Force CALS Test Bed
DET 2 HQ ESC/AV-2P
4027 Colonel Glenn Hwy
Suite 300
Dayton OH 45431-1672

Data Originator:
Cheri Laudenslager
Loral Training & Technical Services
3601 Koppens Way
Chesapeake VA 23323
(804) 487-3809 X359

Data Description:
Technical Raster Test
1 Document Declaration file
12 Raster files

Data Source System:

1840

HARDWARE
SUN OS
Kennedy 9610 Tapedrive

SOFTWARE
Tapetool 1.2.10
CAD 5 Rev. 4.0 Converter

Raster

HARDWARE
SUN OS

SOFTWARE
CAD 5 Rev. 4.0

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN ***Tapetool v1.2.10 UNIX***
XSoft ***CAPS/CALS v40.4***

MIL-R-28002 (Raster)

HP 735

AFCTN ***xrastb.hp***
InterCAP ***X-Change v7.82***
ArborText ***g42tiff***
Island Software ***IslandPaint v3.0***

SGI Indigo2

AFCTN ***xrastb.sgi***
IGES Data Analysis (IDA) ***CALSView.***

SUN SparcStation 2

ArborText ***g42tiff***
Auto-trol ***CCITT Conversion 1.1***
Carberry ***CADLeaf Plus v3.1***
AFCTN ***validg4***
AFCTN ***xrastb.sun4***
IDA ***IGESView v3.0***
Island Software ***IslandPaint v3.0***

PC 486

AFCTN ***validg4***
IDA ***IGESView Windows***
Inset Systems ***HiJaak Pro***
Expert Graphics ***RxHighlight v1.0***

Standards Tested:

MIL-STD-1840A
MIL-R-28002A

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was not marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3. However, a similar commercial marking was attached to the outside of the box.

The tape was not enclosed in a barrier bag or barrier sheet material as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1., was missing. Some 9-track tape units require this BPI to be set manually. A packing list showing all files recorded on the tape was not enclosed.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN ***Tapetool v1.2.10*** utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using XSoft's ***CAPS read1840A*** utility without any reported errors.

The physical structure of the tape meets the requirements defined in MIL-STD-1840A and ANSI x3.27.

3.2.2 Declaration and Header Fields

No errors were reported in the Document Declaration file and data file headers. This portion of the tape meets the CALS MIL-STD-1840A requirements.

4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included in this evaluation.

5. SGML Analysis

No Standard Generalized Markup Language (SGML) files were included in this evaluation.

6. Raster Analysis

The tape contained 12 Raster files. All files were evaluated using the AFCTN ***validg4*** utility. This program reported that all files failed to meet the CALS MIL-R-28002A specification.

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

When the files were checked, they were found to have two CALS Raster headers. This can occur when the tape writing application inserts another header on top of the header applied by the Raster creation utility. Shown below is a screen dump of file D001R001. Note the two headers. The second header starts at location 4000 which should be the start of the Raster data.

```
wpaftb1% od -a r001 |more
0000000    s   r   c   d   o   c   i   d   :  sp   C   9   3   5   9   4
0000020    3   9  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0000040   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0000200    d   s   t   d   o   c   i   d   :  sp   9   3   E   0   0   2
0000220    1  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0000240   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0000400    t   x   t   f   i   l   i   d   :  sp   N   O   N   E  sp  sp
0000420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0000600    f   i   g   i   d   :  sp   N   O   N   E  sp  sp  sp  sp  sp
0000620   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0001000    s   r   c   g   p   h   :  sp   N   O   N   E  sp  sp  sp  sp
0001020   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0001200    d   o   c   c   l   s   :  sp   U   N   C   L   A   S   S   I
0001220    F   I   E   D  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0001240   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0001400    r   t   y   p   e   :  sp   1  sp  sp  sp  sp  sp  sp  sp  sp
0001400    r   t   y   p   e   :  sp   1  sp  sp  sp  sp  sp  sp  sp  sp
0001420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0001600    r   o   r   i   e   n   t   :  sp   0   0   0   ,   2   7   0
0001620   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002000    r   p   e   l   c   n   t   :  sp   0   0   3   4   0   0   ,
0002020    0   0   4   4   0   0  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0002040   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002200    r   d   e   n   s   t   y   :  sp   0   2   0   0  sp  sp  sp
0002220   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002400    n   o   t   e   s   :  sp   N   O   N   E  sp  sp  sp  sp  sp
0002420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0004000    s   r   c   d   o   c   i   d   :  sp   N   O   N   E  sp  sp
0004020   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0004200    d   s   t   d   o   c   i   d   :  sp   N   O   N   E  sp  sp
0004220   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0004400    t   x   t   f   i   l   i   d   :  sp   N   O   N   E  sp  sp
0004400    t   x   t   f   i   l   i   d   :  sp   N   O   N   E  sp  sp
0004420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0004600    f   i   g   i   d   :  sp   N   O   N   E  sp  sp  sp  sp  sp
0004620   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0005000    s   r   c   g   p   h   :  sp   N   O   N   E  sp  sp  sp  sp
0005020   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0005200    d   o   c   c   l   s   :  sp   U   N   C   L   A   S   S  sp
0005220   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0005400    r   t   y   p   e   :  sp   1  sp  sp  sp  sp  sp  sp  sp  sp
0005420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0005600    r   o   r   i   e   n   t   :  sp   0   0   0   ,   2   7   0
0005620   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0006000    r   p   e   l   c   n   t   :  sp   0   1   0   0   2   4   ,
0006020    0   0   7   4   8   0  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0006040   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0006200    r   d   e   n   s   t   y   :  sp   0   4   0   0  sp  sp  sp
0006200    r   d   e   n   s   t   y   :  sp   0   4   0   0  sp  sp  sp
0006220   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
```

```
0006400    n    o    t    e    s    :   sp    F    O    R    M    T    E    K    ,   sp
0006420    I    n    c    .    ,   sp    A   sp    L    o    c    k    h    e    e    d
0006440   sp    C    o    m    p    a    n    y    ;   sp    6    6    1   sp    A    n
0006460    d    e    r    s    e    n   sp    D    r    .    ,   sp    P    g    h    ,
0006500   sp    P    A   sp    1    5    2    2    0    ;   sp    (    4    1    2    )
0006520   sp    9    3    7    -    4    9    0    0   sp   sp   sp   sp   sp   sp   sp
0006540   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0006600  del  del  del  del  del  del  del  del  del  del  del  del  del  del  del  del
0006620  del  del  del  del  del  del  del  del  del    d  bel    @    |  enq   ht  ack
0006640   vt    U    T    2   nl    k    q    ^    Q  eot    R    #    S    #  etx    A
0006660   fs    5    K    s  soh   sp    c  dle   us  soh    t    Q    L    t    M    -
```

Below is a sample header showing the CALS header and the data. Note that the data starts at location 4000.

```
wpaftb1% od -a t001.cal |more
0000000    s    r    c    d    o    c    i    d    :   sp    N    O    N    E   sp   sp
0000020   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0000200    d    s    t    d    o    c    i    d    :   sp    N    O    N    E   sp   sp
0000220   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0000400    t    x    t    f    i    l    i    d    :   sp    N    O    N    E   sp   sp
0000420   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0000600    f    i    g    i    d    :   sp    N    O    N    E   sp   sp   sp   sp   sp
0000620   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0001000    s    r    c    g    p    h    :   sp    N    O    N    E   sp   sp   sp   sp
0001020   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0001200    d    o    c    c    l    s    :   sp    N    O    N    E   sp   sp   sp   sp
0001220   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0001400    r    t    y    p    e    :   sp    1   sp   sp   sp   sp   sp   sp   sp   sp
0001420   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0001600    r    o    r    i    e    n    t    :   sp    0    0    0    ,    2    7    0
0001600    r    o    r    i    e    n    t    :   sp    0    0    0    ,    2    7    0
0001620   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0002000    r    p    e    l    c    n    t    :   sp    0    1    0    0    2    4    ,
0002020    0    0    7    4    8    0   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
0002040   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0002200    r    d    e    n    s    t    y    :   sp    0    4    0    0   sp   sp   sp
0002220   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0002400    n    o    t    e    s    :   sp    N    O    N    E   sp   sp   sp   sp   sp
0002420   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp   sp
*
0004000  del  del  del  del  del  del  del  del  del  del  del  del  del  del  del  del
0004020  del  del  del  del  del  del  del  del  del    d  bel    @    |  enq   ht  ack
0004040   vt    U    T    2   nl    k    q    ^    Q  eot    R    #    S    #  etx    A
0004060   fs    5    K    s  soh   sp    c  dle   us  soh    t    Q    L    t    M    -
```

Loral used the AFCTN ***Tapetool*** utility to write the tape. This utility will insert a correct MIL-STD-1840A header on top of the supplied Raster file. Note, most Raster creation utilities insert a partial CALS header because the information on density, scan direction, pel, and line count are

inserted at that time. If the Raster files have a header, ***Tapetool*** should be run with the -roff switch activated. This prevents ***Tapetool*** from writing another header on top of the file.

When the AFCTN ***Tapetool*** utility read the tape, it striped the CALS header off, and the resulting file was then tested. This file still did not meet the CALS standards. All viewing utilities available in the AFCTB, with the exception of Inset Systems' ***HiJaak Pro*** would not read or display the files.

All 12 files were read into Inset Systems' ***HiJaak Pro*** and written out using a different name. These files could then be viewed by all of the Raster viewers without any reported errors. The AFCTN ***validg4*** utility reported these files as valid files. It was noted that file D001R004 was nearly 500K in size. When this file was decompressed, some systems could not handle the file without extensive disk cashing operations.

The corrected files were read into the AFCTN ***xrastb.sun4*** viewing utility. No problems were noted except with file D001R004, which was too large for the system.

The files were read into Carberry's ***CADLeaf*** software and displayed without a reported error.

The files were read into Inset Systems' ***HiJaak for Windows*** without a reported error.

The Raster files were imported into Expert Graphics' ***Rx-Highlight*** and displayed without a reported error.

The Raster files do not meet the CALS MIL-R-28002 specification, due to the problem with the double headers.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included in this evaluation.

8. Conclusions and Recommendations

The tape from Loral Training and Technical Services was basically correct. The tape could be read properly using the AFCTN ***Tapetool*** Software without a reported error. However, the construction of the Raster files was incorrect, due to the insertion of double headers. This caused the Raster files to be unusable. The tape does not meet the requirements defined in MIL-STD-1840A.

The errors with the Raster images are serious. The construction of the Raster files with the double headers result in unusable files. The Raster files do not meet the CALS MIL-R-28002A specification.

The tape does not meet the CALS MIL-STD-1840A requirements, due to the errors in the Raster headers.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

```
CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Jul  8 14:37:34 1994

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set082

                                                                    Page: 1
```

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001R001	Raster	F/00128	02048/000065	Extracted
D001R002	Raster	F/00128	02048/000043	Extracted
D001R003	Raster	F/00128	02048/000065	Extracted
D001R004	Raster	F/00128	02048/000245	Extracted
D001R005	Raster	F/00128	02048/000058	Extracted
D001R006	Raster	F/00128	02048/000075	Extracted
D001R007	Raster	F/00128	02048/000030	Extracted
D001R008	Raster	F/00128	02048/000028	Extracted
D001R009	Raster	F/00128	02048/000021	Extracted
D001R010	Raster	F/00128	02048/000023	Extracted
D001R011	Raster	F/00128	02048/000023	Extracted
D001R012	Raster	F/00128	02048/000017	Extracted

```
Catalog Process terminated normally.
```

9.2 Tape Evaluation Log

```
CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)
  Standards referenced:
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Jul  8 14:37:02 1994

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1CALS01                                                              4

  Label Identifier: VOL1
  Volume Identifier: CALS01
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 4

HDR1D001             CALS0100010001000000 94181 00000 000000

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: CALS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0000
  Generation Version Number: 00
  Creation Date:  94181
  Expiration Date:  00000
  File Accessibility:
  Block Count: 000000
  Implementation Identifier:

                          <<<<< PART OF LOG FILE REMOVED HERE >>>>>

############ End Of Tape File Set ###############

Deallocating /dev/rmt0...

Tape Import Process terminated normally.
```

9.3 Tape File Set Validation Log

```
CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Fri Jul  8 14:37:34 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set082

Found file: D001
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: Loral Training and Technical Services, 3601 Koppens Way, Chesapeake,
        VA 23323
srcdocid: C9359439
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19940628
dstsys: MILES
dstdocid: 93E0021
dstrelid: NONE
dtetrn: 19940630
dlvacc: NONE
filcnt: R12
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: Product Data
docttl: NONE

Found file: D001R001
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: C9359439
dstdocid: 93E0021
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 003400,004400
```

```
rdensty: 0200
notes: NONE

Saving Raster Header File: D001R001_HDR
Saving Raster Data File: D001R001_GR4

Found file: D001R002
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: C9359439
dstdocid: 93E0021
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 003400,004400
rdensty: 0200
notes: NONE

Saving Raster Header File: D001R002_HDR
Saving Raster Data File: D001R002_GR4
```

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

```
Found file: D001R012
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: C9359439
dstdocid: 93E0021
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 001704,002200
rdensty: 0200
notes: NONE

Saving Raster Header File: D001R012_HDR
Saving Raster Data File: D001R012_GR4
```

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

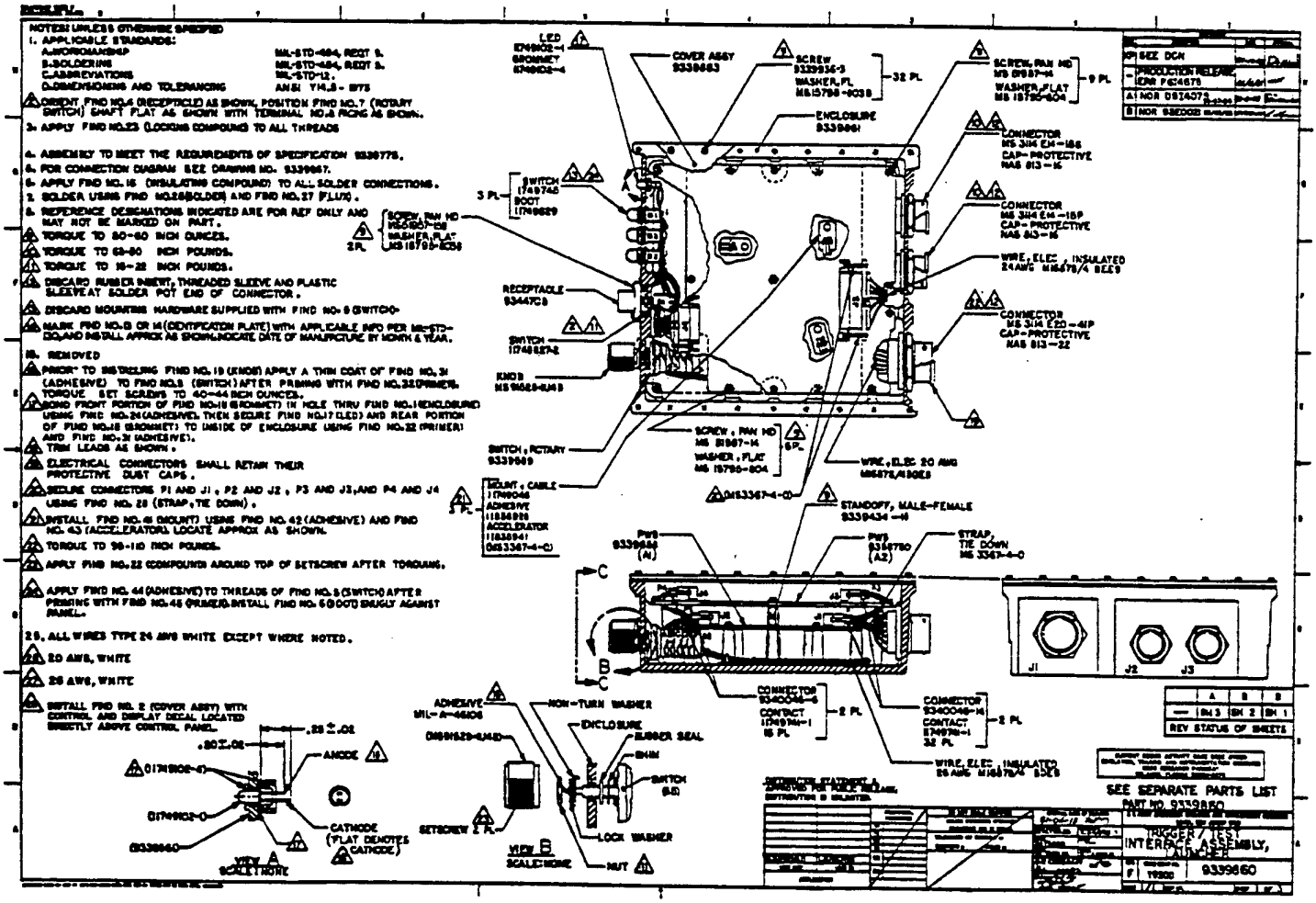
9.4 Other Tape Reading Logs

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001     ' ---
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00211.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00212.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00213.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00214.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00215.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00216.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00217.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00218.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E00219.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E002110.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E002111.R.cci'.
/cals/caps/Bin/read1840A: writing data file 'aftb9495/93E0021/93E002112.R.cci'.
-- declaration file indicates 0 files of type T
-- declaration file indicates 0 files of type G
-- declaration file indicates 0 files of type H
-- declaration file indicates 0 files of type Q
-- declaration file indicates 12 files of type R
-- declaration file indicates 0 files of type C
-- declaration file indicates 0 files of type X
-- declaration file indicates 0 files of type P
-- declaration file indicates 0 files of type Z
```

10. Appendix D - Detailed Raster Analysis

10.1 File D001R004 - Corrected

10.1.1 Output RxHighlight



10.1.2 Output RxHighlight